CI/SfB

Yu6

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

Safeguard Europe Ltd
6 Redkiln Close
Horsham
West Sussex RH13 5QL
Tel: 01403 210204 Fax: 01403 217529
e-mail: info@safeguardeurope.com
website: www.safeguardeurope.com

Agrément Certificate No 97/3363
*Second issue**

SAFEGUARD DAMP-PROOF SYSTEMS

Couche d'étanchéité pour murs par injection chimique
Feuchtigkeitssperre im Wandbereich

Product

- *THIS CERTIFICATE RELATES TO THE SAFEGUARD DAMP-PROOF SYSTEMS, A RANGE OF PRODUCTS FOR FORMING A DAMP-PROOF COURSE IN EXISTING WALLS, AND THE ASSOCIATED REPLASTERING.*
- *Installation of the damp-proofing systems is carried out by Safeguard Europe Ltd's approved contractors in accordance with BS 6576 : 2005 and the British Wood Preserving and Damp-proofing Association (BWPDA) Code of Practice COP3 : 1997.*

continued

Regulations — Detail Sheet 1

1 The Building Regulations 2000 (as amended) (England and Wales)

The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of remedial damp-proofing (walls) with the Building Regulations. In the opinion of the BBA, the use of Safeguard Damp-proof Systems in an existing building is not subject to these Regulations, but action to satisfy Requirement C2(a) and Regulation 7 may be necessary for a 'Material change of use' as defined in Regulation 5(a).

Requirement:	C2(a)	Resistance to moisture
Comment:		The damp-proofing systems satisfy the BBA rising damp test and adequately resist the passage of moisture.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The systems are acceptable. See the *Durability* section of the relevant accompanying Detail Sheets.

continued

• *Replastering is necessary to prevent damage to subsequent redecoration. To avoid split responsibility, this should be conducted by the installer or his approved agent.*

These Front Sheets must be read in conjunction with the accompanying Detail Sheets, which provide information specific to the damp-proofing materials and the replastering specification.

2 The Building (Scotland) Regulations 2004

In the opinion of the BBA, the use of Safeguard Damp-proof Systems in an existing building is not controlled by these Regulations, but action to satisfy the Regulation and related Mandatory Standards below may be necessary for a 'Conversion' as defined in Regulation 4 of these Regulations.

Regulation:	8	Fitness and durability of materials and workmanship
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The systems can contribute to a construction satisfying this Regulation. See the *Durability* section of the relevant accompanying Detail Sheets and the *Installation* part of this Certificate.
Regulation:	9	Building standards — construction
Standard:	3.3	Flooding and ground water
Standard:	3.4	Moisture from the ground
Standard:	3.10	Precipitation
Comment:		The damp-proofing systems satisfy the BBA rising damp test and adequately resist the passage of moisture and can contribute to satisfying these Standards with reference to clauses 3.3.1[(1)(2)], 3.4.1[(1)(2)], 3.4.5[(1)(2)] and 3.10.1[(1)(2)] respectively.
Regulation:	12	Building standards — conversions
Comment:		All comments given for these systems under Regulation 9, also apply to this Regulation with reference to clause 0.12.1[(1)(2)] and Schedule 6[(1)(2)].
		(1) Technical Handbook (Domestic).
		(2) Technical Handbook (Non-Domestic).

3 The Building Regulations (Northern Ireland) 2000

In the opinion of the BBA, the use of Safeguard Damp-proof Systems in an existing building is not controlled by these Regulations, but action to satisfy Regulations B2 and C4 may be necessary for a `Material change of use' under Regulation A9.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The systems are acceptable. The products are odourless and do not give off harmful vapours. See the *Durability* section of the relevant accompanying Detail Sheets.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		The damp-proofing systems satisfy the BBA rising damp test and adequately resist the passage of moisture.

4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See sections: 2 *Delivery and site handling* of the appropriate Detail Sheet.

Technical Specification

5 Description

5.1 Safeguard Damp-proof Systems consist of materials injected into existing walls to form a damp-proof course, and the subsequent replastering.

5.2 The systems components are manufactured by controlled batch-blending processes. Quality control is exercised over raw materials during manufacture and on the final products.

5.3 The systems components are described in the accompanying Detail Sheets.

Design Data

6 General

6.1 Safeguard Damp-proof Systems are used in accordance with BS 6576 : 2005 to provide a barrier against rising damp where there is no damp-proof course or where the existing damp-proof course has failed, for use in existing:

- solid walls of brickwork, blockwork or masonry, up to 600 mm thick
- conventional cavity walls, or
- walls of rubble-filled construction of any thickness.

6.2 Replastering is necessary to retain salts in the body of the wall to prevent damage to subsequent redecoration. This should be carried out according to the Safeguard Europe Ltd's Replastering Specification (see Detail Sheet 4).

7 Drying time

After treatment, a 230 mm thick solid brick wall, previously affected by rising damp, should normally dry out in 6 to 12 months, provided normal heating is used during the winter months. A thicker wall may take longer. Where hygroscopic salts are present, the wall may not dry completely but the replastering system will prevent damage to internal decorations.

Installation

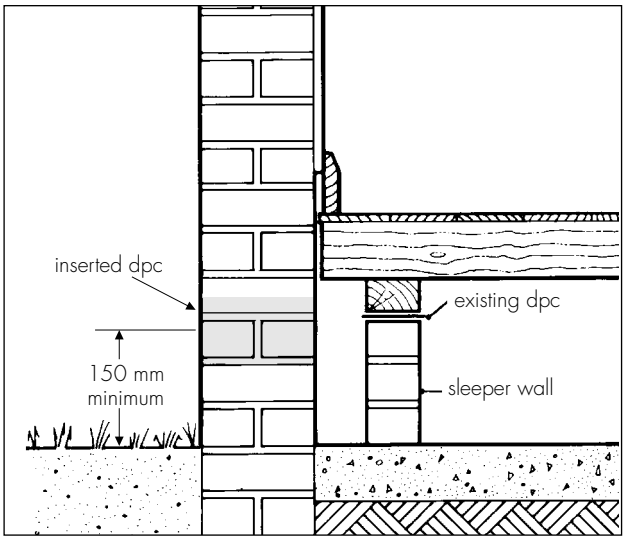
8 General

Installation of Safeguard Damp-proof Systems is carried out in accordance with BS 6576 : 2005 and the requirements of the British Wood Preserving and Damp-Proofing Association Code of Practice COP3 : 1997 by Safeguard Europe Ltd's approved installers .

9 Action with respect to flooring timbers

9.1 Where a suspended timber floor is independently supported on sleeper walls, with an effective damp-proof course and showing no signs of dampness, these need not be treated (see Figure 1).

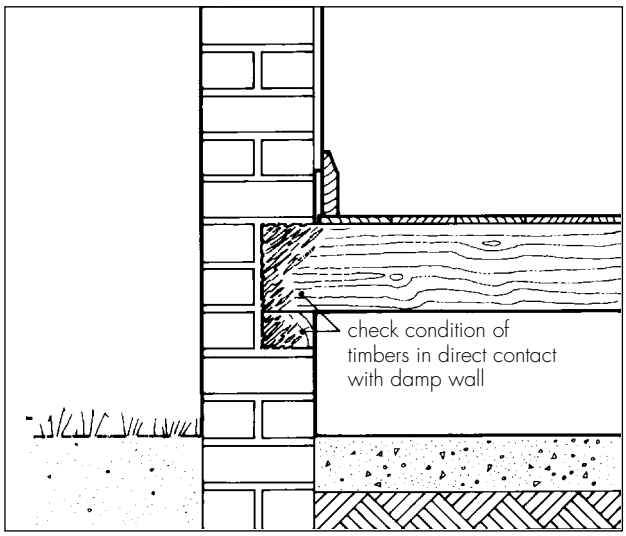
Figure 1 Suspended timber floor on sleeper wall



9.2 Where a suspended timber floor is supported on joists and/or a wall plate bearing on, or embedded in, the wall, there is a possibility of decay, particularly where concealed timbers are in contact with the damp wall. The condition of these timbers should be ascertained and remedial action taken if necessary (see Figure 2).

9.3 If damage is limited to the joist ends, the floors may be re-formed, using sleeper walls or joist-hangers, to isolate the timbers from the damp wall (see Figure 3).

Figure 2 Check embedded timber for decay



9.4 If the timbers are sound, the existing floor may be retained provided the injected damp-proof course is formed below the timber joists and/or wall plate (see Figure 4).

Figure 3 Isolation of timber joists from damp wall

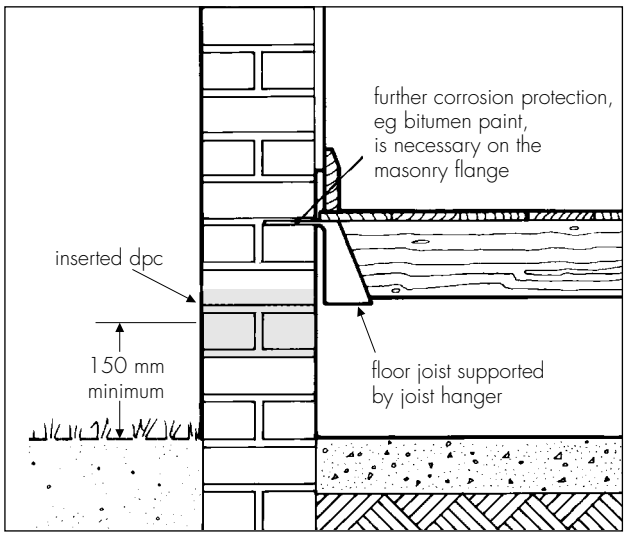
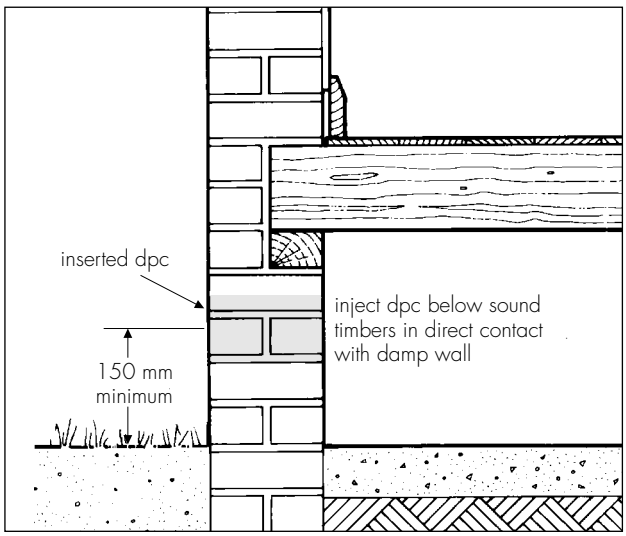


Figure 4 Inject dpc below wall plate



10 Preparation

10.1 The course to be injected is chosen so that the position of the horizontal damp-proof course complies, as far as is practicable, with the recommendations of BS 6576 : 2005, Clause 4.3 (see section 9.4 of these Front Sheets).

10.2 Internal walls on solid floors are treated as close to the floor as possible.

10.3 Complementary vertical damp-proof courses are positioned, where necessary, to isolate treated walls from the effects of rising damp in adjoining walls or to maintain continuity between horizontal damp-proof courses at different levels.

10.4 Internal plastering affected by hygroscopic salts is removed from the area to be treated to a height of 500 mm above the maximum level of the rising damp (subject to a 1 m minimum height). Internal skirting and flooring are also removed, as necessary, to expose the area for treatment. Externally, the proposed damp-proof course line is exposed, where necessary, by removing any facing material.

11 Procedure

The installation of the various damp-proofing fluids is summarised in the accompanying Detail Sheets.

12 General

Untreated walls

12.1 Untreated walls are isolated by the injection of a vertical dpc throughout the thickness of the wall. Vertical dpc's are also used to maintain continuity between horizontal dpc's at different levels.

Treated walls

12.2 The treated walls are left for a period of at least 14 days to allow initial drying out. Internal plastering is applied in accordance with Detail Sheet 4 of this Certificate.

Bridging the damp-proof course

12.3 Particular care is taken to avoid bridging the damp-proof course, either internally or externally. Where external rendering has been removed, it is restored, ending in a bell casting above the injected damp-proof course.

External wall finish

12.4 Holes in the external wall surfaces are plugged with sand/cement mortar coloured to match the existing wall surface.

Other sources of dampness

12.5 The original survey may have identified other possible causes of dampness, and measures to rectify these are taken as necessary.

Technical Investigations

The following is a summary of the technical investigations carried out on Safeguard Damp-proof Systems.

13 Investigations

13.1 The manufacturing processes were examined, and the raw material specifications, formulations and quality control procedures were established.

13.2 An examination was made of existing data on the effectiveness of silicone-based products as a chemical dpc.

13.3 An examination was made of data on the effectiveness and durability of similar materials used as external surface water repellents, and an assessment was made of the durability of the injection system.

13.4 Visits were made to sites to assess the practicability of installation.

13.5 Assessments were made of the presence of odour and the materials available for replastering.

13.6 Other specific tests and investigations on the products are detailed in the *Technical Investigations* part of the appropriate Detail Sheets.

Additional Information

The management systems of Safeguard Europe Ltd have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2000 by the British Standards Institution Quality Assurance (QAS 2567/350, Certificate No FM1937).

Bibliography

BS 5492 : 1990 *Code of practice for internal plastering*

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

BS EN ISO 9001 : 2000 *Quality management systems — Requirements*

BWPDA Code of Practice COP3 : 1997 *Code of Practice for Installation of Chemical Damp-proof Courses*

Conditions of Certification

14 Conditions

14.1 This Certificate:

(a) relates only to the product that is named, described, installed, used and maintained as set out in this Certificate;

(b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;

(c) is valid only within the UK;

(d) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;

(e) is copyright of the BBA;

(f) is subject to English law.

14.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

14.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabrication including all related and relevant processes thereof:

(a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine; and

(c) are reviewed by the BBA as and when it considers appropriate.

14.4 In granting this Certificate, the BBA is not responsible for:

(a) the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product;

(b) the right of the Certificate holder to market, supply, install or maintain the product; and

(c) the actual works in which the product is installed, used and maintained, including the nature, design, methods and workmanship of such works.

14.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, Safeguard Damp-proof Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 97/3363 is accordingly awarded to Safeguard Europe Ltd.

On behalf of the British Board of Agrément

Date of Second issue: 13th March 2006

Chief Executive

**Original Certificate issued on 17th June 1997. This amended version includes references to updated national Building Regulations, Standards, the BWPDA Code of Practice, change of company name and company website and updated* Conditions of Certification.

Blank page

British Board of Agrément
P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA
Fax: 01923 665301

e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

CI/SfB
Yu6

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

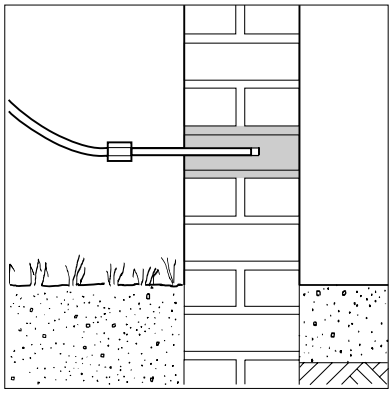
Safeguard Europe Ltd

Certificate No 97/3363

DETAIL SHEET 2
*Second issue**

SAFEGUARD HYDRACHECK

Product



- *THIS DETAIL SHEET REPLACES CERTIFICATE No 95/3157 AND RELATES TO SAFEGUARD HYDRACHECK, A SILICONATE/SILICATE SOLUTION FOR FORMING A DAMP-PROOF COURSE IN EXISTING WALLS.*
- *Installation is by pressure injection in accordance with BS 6576 : 2005 and the British Wood Preserving and Damp-proofing Association (BWPDA) Code of Practice COP3 : 1997.*

This Detail Sheet must be read in conjuction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Safeguard Hydracheck is a concentrated silicate/siliconate solution.

1.2 The process involves the saturation by pressure injection of a selected course of brickwork or mortar, or an equivalent area of blockwork or stone, with the diluted fluid and the subsequent replastering.

1.3 The product used in replastering is described in Detail Sheet 4.

1.4 The injection fluid is produced by diluting the concentrate with clean water at the installer's premises. The standard pack is made up to a total volume of 25 litres.

1.5 The product is also available as Aquacheck, a pre-diluted form of Hydracheck concentrate.

2 Delivery and site handling

2.1 The concentrate is supplied in polythene containers of 3.6 litres (standard pack) and 25 litres.

2.2 The concentrate and injection fluid are classified as 'Corrosive' and 'Irritant', respectively, under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3) and containers carry the appropriate health warning. Precautions are necessary during handling, dilution and injection, to minimise contact from spillage or leakage. The normal precautions (use of goggles or visor, gloves, protective clothing and prompt removal of contaminated clothing) should be strictly observed during the handling of the concentrate. If fluid comes into contact with the skin it must be washed off promptly. If it comes into contact with the eyes they should be flushed with cold water for 10 minutes, and medical attention sought.

Design Data

3 General

Safeguard Hydracheck has no effect on expanded polystyrene or bitumen.

4 Durability

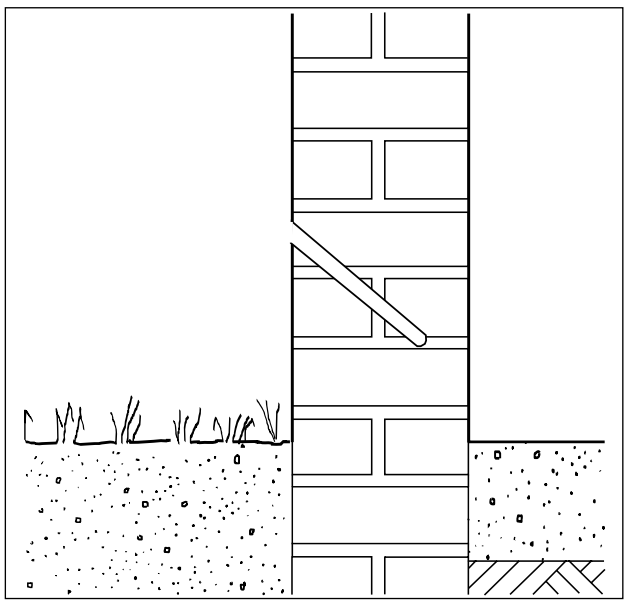
Silicone masonry surface water repellents for masonry are known to be effective for 12 years. These products are applied to the surface of a wall, but a dpc application saturates the wall in depth. The Hydracheck process is expected to remain effective for at least 20 years.

5 Procedure

Mortar

5.1 Holes, from 10 mm to 16 mm in diameter, are drilled to predetermined depths at intervals of between 120 mm and 150 mm along the selected course, avoiding the perpends. Preferably, holes are drilled horizontally into a mortar bed joint to a depth of at least half, but no more than two-thirds, of the wall's thickness. Alternatively, they may be drilled into the bricks at an angle of depression of 25° to 45° terminating in a mortar bed joint at the level of the required damp-proof course (see Figure 1).

Figure 1 Angled drilling into the mortar course



Brickwork

5.2 Holes, from 10 mm to 16 mm in diameter, are drilled to predetermined depths at intervals of between 120 mm and 150 mm along the selected course. Two holes are drilled in each stretcher and one in each header to an average spacing of approximately 120 mm, with a maximum of 150 mm. If a brick course proves to be too dense to allow adequate penetration of fluid, drilling may be carried out in the adjacent mortar course (see section 5.1). Percussion drills should not be used on half-brick walls.

Solid stone

5.3 In solid or cavity walls of conventional construction in blockwork or stone, the drilling and injection procedure is adjusted to accommodate variations in the density, porosity and structure, but in each case the procedure chosen ensures a continuous unbroken treatment along the length of the wall.

Rubble-fill

5.4 In walls with a rubble-filled cavity, the two masonry leaves are first injected using the techniques described above. The holes in one leaf are then re-drilled to penetrate into the rubble core and additional fluid is injected.

Injection

5.5 The solution is injected at pressures up to 350 kPa for mortar injection and 500 kPa for brickwork. Nozzles fitted with pressure-tight seals are inserted into the drilled holes and injection is continued until complete saturation is achieved and the fluid begins to exude from the substrate. The nozzles are removed and subsequent holes are similarly injected.

Different wall types

5.6 Walls 115 mm thick are injected from one side only.

5.7 Solid walls 230 mm thick are normally treated from both sides but if access is restricted they may be drilled and injected progressively from one side using a sequence of drilling, injecting and re-drilling to deepen the hole by 100 mm to 120 mm, and reinjecting.

5.8 Solid walls of greater thickness may be treated from one or both sides. In each case the progressive injection technique is used.

5.9 Cavity walls are normally treated from both sides, but if the thickness of the individual leaves permits, injection from one side at increasing depths is conducted.

Technical Investigations

The following is a summary of the technical investigations carried out on Safeguard Hydracheck.

6 Tests

Tests were carried out by the BBA to determine:

- effectiveness against rising damp, to MOAT No 39 : 1988, method 4.3.1.4
- substantivity of injection treatment, to BBA test specification
- total and active solids contents, to BBA test specification
- specific gravity, to BS 3900-A12 : 1975.

7 Investigations

7.1 A re-examination was made of the data and investigations on which the previous Certificate No 95/3157 was based. The conclusions drawn from the original data remain valid.

7.2 An assessment was made of Safeguard Europe Ltd's safety assessment on Safeguard Hydracheck under the Control of Substances Hazardous to Health Regulations 2002 (COSHH).

Bibliography

BS 3900-A12 : 1975 *Methods of test for paints — Tests on liquid paints — Determination of density*

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

MOAT No 39 : 1988 *The assessment of damp-proof course systems for existing buildings*

BWPDA Code of Practice COP3 : 1997 *Code of Practice for Installation of Chemical Damp-proof Courses*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of Second issue: 13th March 2006

Chief Executive

**Original Detail Sheet issued on 17th June 1997. This amended version includes change of company name and revised reference to Standards and to the BWPDA Code of Practice.*

British Board of Agrément
P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA
Fax: 01923 665301

e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

CI/SfB
Yu6

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

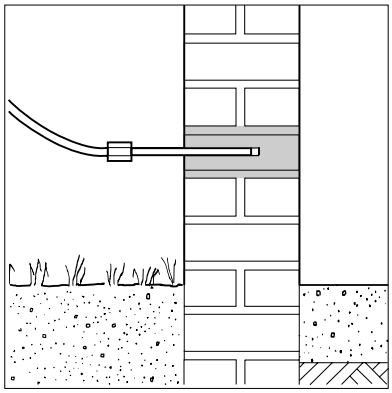
Safeguard Europe Ltd

Certificate No 97/3363

DETAIL SHEET 3
*Second issue**

SAFEGUARD MICROSILAN

Product



- *THIS DETAIL SHEET RELATES TO SAFEGUARD MICROSILAN, A SILICATE : SILICONATE : SILANE MICROEMULSION CONCENTRATE FOR FORMING A DAMP-PROOF COURSE IN EXISTING WALLS.*
- *After dilution with water it is installed by pressure injection in accordance with BS 6576 : 2005 and the British Wood Preserving and Damp-proofing Association (BWPDA) Code of Practice COP3 : 1997.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Safeguard Microsilan is a mixture of potassium methyl siliconate, silicate and silane microemulsion in concentrated form.

1.2 The process involves the saturation by pressure injection of a selected course of brickwork or mortar, or an equivalent area of blockwork or stone, with the diluted fluid and the subsequent replastering.

1.3 The product used in replastering is described in Detail Sheet 4.

1.4 The injection fluid is produced by diluting the concentrate with clean water at the installer's premises. The standard pack is made up to a total volume of 25 litres.

1.5 The product is also available as Dampcheck Plus, a pre-diluted form of the concentrate.

2 Delivery and site handling

2.1 The concentrate is supplied in polythene containers of 4 litres (standard pack) and 25 litres.

2.2 The concentrate and injection fluid are classified as 'Corrosive' and 'Irritant', respectively, under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3) and containers carry the appropriate health warning. Precautions are necessary during handling, dilution and injection, to minimise contact from spillage or leakage. The normal precautions (use of goggles or visor, gloves, protective clothing and prompt removal of contaminated clothing) should be strictly observed during the handling of the concentrate. If fluid comes into contact with the skin it must be washed off promptly. If it comes into contact with the eyes they should be flushed with cold water for 10 minutes, and medical attention sought.

Design Data

3 General

Safeguard Microsilan has no effect on expanded polystyrene or bitumen.

4 Durability

Silicone masonry surface water repellents for masonry are known to be effective for 12 years. These products are applied to the surface of a wall, but a dpc application saturates the wall in depth. The Microsilan process is expected to remain effective for at least 20 years.

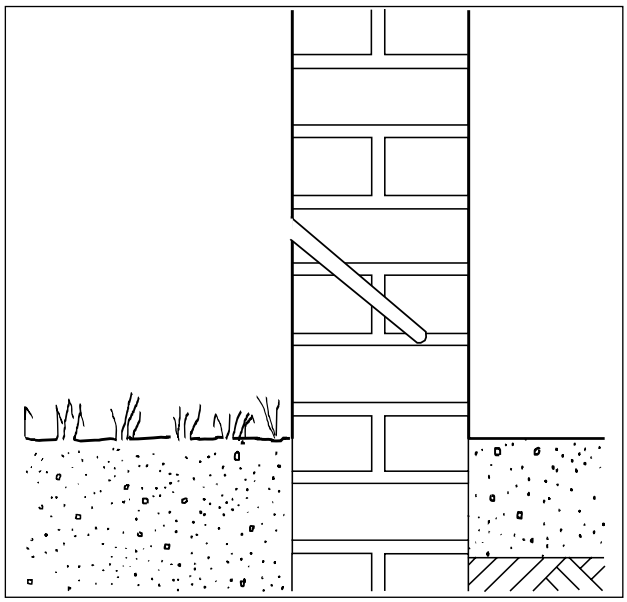
Installation

5 Procedure

Mortar

5.1 Holes, from 10 mm to 16 mm in diameter, are drilled to predetermined depths at intervals of between 120 mm and 150 mm along the selected course, avoiding the perpends. Preferably, holes are drilled horizontally into a mortar bed joint to a depth of at least half, but no more than two-thirds, of the wall's thickness. Alternatively, they may be drilled into the bricks at an angle of depression of 25° to 45° terminating in a mortar bed joint at the level of the required damp-proof course (see Figure 1).

Figure 1 Angled drilling into the mortar course



Brickwork

5.2 Holes, from 10 mm to 16 mm in diameter, are drilled to predetermined depths at intervals of between 120 mm and 150 mm along the selected course. Two holes are drilled in each stretcher and one in each header to an average spacing of approximately 120 mm, with a maximum of 150 mm. If a brick course proves to be too dense to allow adequate penetration of fluid, drilling may be carried out in the adjacent mortar course (see section 5.1). Percussion drills should not be used on half-brick walls.

Solid stone

5.3 In solid or cavity walls of conventional construction in blockwork or stone, the drilling and injection procedure is adjusted to accommodate variations in the density, porosity and structure, but in each case the procedure chosen ensures a continuous unbroken treatment along the length of the wall.

Rubble-fill

5.4 In walls with a rubble-filled cavity, the two masonry leaves are first injected using the techniques described above. The holes in one leaf are then re-drilled to penetrate into the rubble core and additional fluid is injected.

Injection

5.5 The solution is injected at pressures up to 350 kPa for mortar injection and 500 kPa for brickwork. Nozzles fitted with pressure-tight seals are inserted into the drilled holes and injection is continued until complete saturation is achieved and the fluid begins to exude from the substrate. The nozzles are removed and subsequent holes are similarly injected.

Different wall types

5.6 Walls 115 mm thick are injected from one side only.

5.7 Solid walls 230 mm thick are normally treated from both sides but if access is restricted they may be drilled and injected progressively from one side using a sequence of drilling, injecting and re-drilling to deepen the hole by 100 mm to 120 mm, and reinjecting.

5.8 Solid walls of greater thickness may be treated from one or both sides. In each case the progressive injection technique is used.

5.9 Cavity walls are normally treated from both sides, but if the thickness of the individual leaves permits, injection from one side at increasing depths is conducted.

Technical Investigations

The following is a summary of the technical investigations carried out on Safeguard Microsilan.

6 Tests

6.1 Tests were carried out by the BBA to determine early water repellency to BS 6477 : 1992.

6.2 An examination of the test data on the following features was carried out on related products:

- effectiveness against rising damp
- substantivity of injection treatment.

8 Investigations

An assessment was made of Safeguard Europe Ltd's safety assessment on Safeguard Microsilan under the Control of Substances Hazardous to Health Regulations 2002 (COSHH).

Bibliography

BS 6477 : 1992 *Specification for water repellents for masonry surfaces*

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

BWPDA Code of Practice COP3 : 1997 *Code of Practice for Installation of Chemical Damp-proof Courses*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of Second issue: 13th March 2006

Chief Executive

**Original Detail Sheet issued on 17th June 1997. This amended version includes change of company name and revised reference to Standards and to the BWPDA Code of Practice.*

British Board of Agrément
P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA
Fax: 01923 665301

e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

CI/SfB
Yu6

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Safeguard Europe Ltd

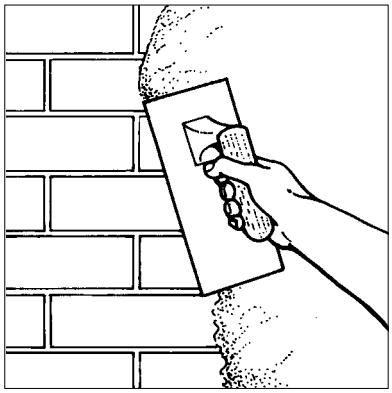
SAFEGUARD EUROPE'S REPLASTERING SPECIFICATION

Certificate No 97/3363

DETAIL SHEET 4

*Second issue**

Product



- *THIS DETAIL SHEET RELATES TO SAFEGUARD EUROPE'S REPLASTERING SPECIFICATION, BASED ON SAFEGUARD RENDERGUARD GOLD, FOR USE ON EXISTING INTERNAL WALLS FOLLOWING THE INSERTION OF A CHEMICAL DPC SYSTEM.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

Safeguard Europe's Replastering Specification consists of Safeguard Renderguard Gold, a combined waterproofing, salt retardant and plasticiser additive for use in sand/cement replastering mixes.

2 Delivery and site handling

2.1 The packaging, shelf-life and storage requirements are given in Table 1.

Table 1 Packaging arrangements, shelf-life and storage requirements

Product	Packaging details details	Shelf-life and storage requirements
Safeguard Renderguard Gold	1, 5 and 25 litre containers	Two years when stored in a dry place. Protect from frost, high temperature and direct sunlight

2.2 The product is innocuous in normal use. However, it should not be swallowed or splashed into the eyes. If splashing occurs, eyes should be washed with copious quantities of clean water and medical attention sought.

2.3 The product's packaging bears the BBA identification mark incorporating the number of this Certificate.

Design Data

3 General

3.1 Safeguard Renderguard Gold additive for sand/cement mixes is satisfactory for application to walls of all types of masonry where there has been rising damp and remedial dpc treatment has been conducted.

3.2 Safeguard Renderguard Gold additive mixes are applied at a thickness of 12 mm using the normal procedures defined in BS 5492 : 1990, and finished using 3 mm Carlite finish, multifinish or similar.

3.3 The plaster has good resistance to mechanical damage.

3.4 Normal methods for fixing and chasing can be used, but the surface should be restored using Safeguard Renderguard Gold additive sand/cement mix.

4 Resistance to salt transfer

Where rising damp has created a high salt content in walls and an effective chemical dpc remedial treatment has been conducted, and where no other source of water ingress exists, Safeguard Europe's Replastering Specification will provide an effective barrier against salt transfer.

5 Durability

The durability of Safeguard Europe's Replastering Specification is equivalent to traditional plastering to BS 5492 : 1990.

Installation

6 General

6.1 A remedial chemical damp-proofing treatment (see the appropriate Detail Sheet) is conducted in accordance with BS 6576 : 2005.

6.2 The standard of installation of Safeguard Europe's Replastering Specification should comply with BS 8000-10 : 1995.

6.3 Replastering should not normally be conducted for at least 14 days after the remedial dpc installation.

6.4 If the background is impermeable and offers little suction (ie where rising damp has occurred in the mortar joints), the joints are raked out to provide a mechanical key and/or a bonding aid is applied to the surface and the wall replastered immediately.

7 Application

Preparatory work

7.1 Details such as timber skirtings should be removed as described in the specification.

7.2 Plaster is removed back to masonry to a height as described in the specification, but should not be less than a height of 1 metre or 500 mm above the maximum level of the rising dampness/ salt contaminated plaster, whichever is the greater.

7.3 Mortar joints are raked out to a depth of 15 mm.

7.4 Timber fixing grounds present in the masonry are removed.

Mixing

7.5 The water must be clean, free from oil, dirt or other injurious chemicals (water suitable for drinking, if available).

First coat

7.6 A mix of three parts sand to one part cement using gauging water containing Safeguard Renderguard Gold is prepared[1]. The sand should be specified as washed, sharp sand, loam-free, satisfying the requirements for M grading as laid down in BS 882 : 1992. The cement should be fresh and free flowing.

(1) Mix one part Renderguard Gold with between 24 and 39 parts water — 1:24 gives maximum water resistance and 1:39 is suitable for general plastering applications.

7.7 A minimum of water is used to ensure a dense coat; an approximation is not more than 8 litres per 50 kg of dry mix.

7.8 The mix is compacted into joints and rendered to give an overall thickness of 12 mm, without over-trowelling. When the cement obtains its first set, this surface is scratched to form a key.

Second coat

7.9 The mix, as for the first coat but with additive-free water, is applied to a thickness of 12 mm without over-trowelling, giving an overall thickness of 25 mm of render. This coat should be applied before the first coat has finally set, to obtain a satisfactory adhesion between the rendering coats. The surface should be scratched to form a key for the finishing plaster.

Finish coat

7.10 This should be a mix of Carlite finish, multifinish or similar, applied to a thickness of 3 mm. Other finishes are acceptable provided they are porous. The surface must not be polished.

Miscellaneous

7.11 Where masonry is unstable this must be made good prior to the application of the renderings. Where it is not possible to obtain a proper bond between the wall fabric and rendering, eg with cob walling, expanded metal lath must be fixed to the wall surface before application.

7.12 To prevent any damp within a solid floor being transferred into the soft setting coat, renders and plasterwork may extend behind the skirtings but should not join the finished floor level.

7.13 Gypsum plaster or lightweight premix plasters must not be used to bond metal angle beads to corners.

7.14 Where conventional timber skirtings are to be fixed, these should be cut to size and fully worked, with a minimum of three brush coats of wood preservative applied. It should be noted that the walls will take a considerable time to dry out and it is possible that sufficient moisture would ingress into the new joinery to cause fungal decay.

7.15 Skirting that has been removed but is still sound should have a minimum of three coats of ProBor 20 Gel (HSE 6422) applied to the unpainted surfaces. It is also recommended that the back and bottom of skirtings are given two coats of a bituminous paint, or backed with joinery liner.

7.16 Where practicable, all joinery should be fixed by the use of masonry nails. If not, inorganic fixing grounds should be used, ie plastic, but timber may be used provided it is cut to size and fully worked and immersed for a minimum of 24 hours in Safeguard ProBor DB (HSE 6673) before being inserted into the damp masonry.

7.17 It is important that the specification is strictly adhered to and not varied in any way. No other additives must be added to the mix, unless approved by the manufacturer. Lightweight gypsum premix backing or bonding plasters (eg Carlite) must not be used.

Technical Investigations

The following is a summary of the technical investigations carried out on Safeguard Europe's Replastering Specification.

8 Investigations

8.1 A re-examination was made of the data and investigations on which the Appendices to Safeguard Europe Ltd's previous chemical dpc Certificate was based. The conclusions drawn from the original data remain valid.

8.2 An assessment was made of Safeguard Europe Ltd's safety assessments on Safeguard Renderguard Gold under the Control of Substances Hazardous to Health Regulations 2002 (COSHH).

Bibliography

BS 882 : 1992 *Specification for aggregates from natural sources for concrete*

BS 5492 : 1990 *Code of practice for internal plastering*

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

BS 8000-10 : 1995 *Workmanship on building sites — Code of practice for plastering and rendering*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of Second issue: 13th March 2006

Chief Executive

**Original Detail Sheet issued on 17th June 1997. This amended version includes change of company name, revised Standards, revised handling information and removal of references to Safeguard DR5 Premix.*

British Board of Agrément
P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA
Fax: 01923 665301

e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

CI/SfB
Yu6

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

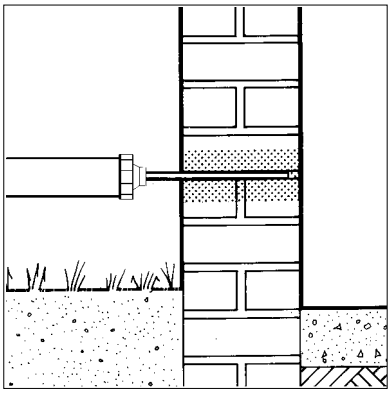
Safeguard Europe Ltd

DRYZONE

Certificate No 97/3363

DETAIL SHEET 5
*Second issue**

Product



- *THIS DETAIL SHEET RELATES TO DRYZONE, A CONCENTRATED SILANE–SILOXANE CREAM FOR INSERTION INTO MORTAR COURSES TO FORM A REMEDIAL DAMP-PROOF COURSE IN EXISTING WALLS.*
- *Installation of Dryzone is carried out in accordance with BS 6576 : 2005 and the British Wood Preserving and Damp-proofing Association (BWPDA) Code of Practice COP3 : 1997.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Dryzone is a concentrated viscous silane/siloxane emulsion cream.

1.2 The Dryzone cream is packed in a foil cartridge, for insertion into the Safeguard Dryzone applicator gun.

1.3 The process involves delivering a set amount of Safeguard Dryzone cream via the applicator gun into a series of holes drilled into the mortar course and the subsequent replastering.

1.4 The product used in replastering is described in Detail Sheet 4.

2 Delivery and site handling

2.1 Dryzone is supplied in 600 ml foil cartridges.

2.2 The product should be stored in a cool, dry place and protected from frost.

Design Data

3 General

Dryzone has no effect on expanded polystyrene or bitumen.

4 Durability

Silicone masonry surface water repellents for masonry are known to be effective for 12 years. These products are applied to the surface of a wall, but a dpc application saturates the wall in depth. The Dryzone process is expected to remain effective for at least 20 years.

Installation

5 Procedure

5.1 Holes 12 mm in diameter are drilled at the base of perpends and at intervals of 120 mm or less along the selected mortar course, to depths for various wall thicknesses as shown in Table 1.

5.2 Solid walls of brick or stone should be drilled/treated from one side only in a single operation. The selected mortar course is drilled at the prescribed centres to the appropriate depth, (see Table 1). Where this is not possible advice should be sought from the Certificate holder.

Table 1 Depth of hole required

Wall thickness[1]	4½" (115 mm)	9" (230 mm)	13½" (345 mm)	18" (460 mm)
Depth of hole	100 mm	190 mm	310 mm	430 mm

(1) For thicker walls the depth of hole should be to within 40 mm of the opposite face.

5.3 For preference, cavity walls should be treated from both sides but, if the thickness of the individual leaves permits, may be treated from one side. When undertaking treatment from one side, the drill must pass completely through the selected mortar course, then across the cavity and to a depth of 100 mm in the other leaf. The cavity must be clear before treatment.

5.4 If possible, in random stone and rubble infill walls, the mortar course should be followed at the appropriate selected level, or drillings may be made into porous stone. Where the variable thickness of stone walls and the possibility of rubble infill dropping and blocking injection holes causes

difficulties, it may be necessary to drill to 50% of the wall thickness, from both sides at a corresponding height. Alternatively, additional holes should be drilled adjacent to obstructed holes to ensure that an adequate volume of Dryzone is introduced to the wall. Drill holes can be repointed with a sand cement mortar.

5.5 The injection process consists of loading the Dryzone cartridge into the applicator gun and inserting the gun delivery tube into the full length of the predrilled hole. Each hole is backfilled fully with Dryzone to within 10 mm of the surface by slowly squeezing the gun trigger. When treating cavity walls from one side it is essential that the holes in each leaf are filled.

Technical Investigations

The following is a summary of the technical investigations carried out on Dryzone.

6 Tests

Tests were carried out by the BBA to determine:

- effectiveness against rising damp to MOAT No 39 : 1988, Method 4.3.1.4(1)
- effectiveness against rising damp to a BBA/Safeguard Europe Ltd method
- total and active solids content to a BBA test specification
- specific gravity to BS 3900-A19 : 1998
- flashpoint to BS 3900-A9 : 1986.

(1) Method 4.3.1.4 test procedure : the small scale pillar test was set up as shown in Figure 7 of MOAT No 39 with the exception that the water level was raised above the untreated mortar line. The test samples were subjected to the following procedure:

Day	Test procedure
0	base separated from pillar, treated and allowed to cure
2	Base replaced under pillar
21	Dwell period introduced — water removed from trough
28	Dwell period ended. Trough refilled with water

7 Investigations

7.1 The manufacturing process was examined, and the raw material specifications, formulation and quality control procedures were established.

7.2 Existing data on the effectiveness of silicone-based products as a chemical dpc were examined.

7.3 Existing data on the effectiveness and durability of similar materials used as external surface water repellents were examined and an assessment was made of the durability of the injection material.

7.4 A visit was made to a site in progress to assess the practicability of installation.

Bibliography

BS 3900-A9 : 1986 *Methods of test for paints — Tests on liquid paints — Determination of flashpoint (closed cup equilibrium method)*
BS 3900-A19 : 1998 *Methods of test for paints — Determination of density by the pyknometer method*

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

MOAT No 39 : 1988 *The assessment of damp-proof course systems for existing buildings*

BWPDA Code of Practice COP3 : 1997 *Code of Practice for Installation of Chemical Damp-proof Courses*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of Second issue: 13th March 2006

Chief Executive

**Original Detail Sheet issued on 30th May 2002. This amended version includes change of company name and revised reference to Standards and to the BWPDA Code of Practice.*

British Board of Agrément
P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA
Fax: 01923 665301

e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

For technical or additional information, contact the Certificate holder (see front page).
For information about the Agrément Certificate, including validity and scope, tel: Hotline 01923 665400, or check the BBA website.